



METASONIC

BUSINESS OBJECTS AS A MEDIATOR BETWEEN PROCESSES AND DATA

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PROCESSES AND DATA

- **Processes describe the sequence of activities for a participant**
- **Processes can not be used for execution if they do not handle data**
- **Only the combination of processes and data make a complete application**



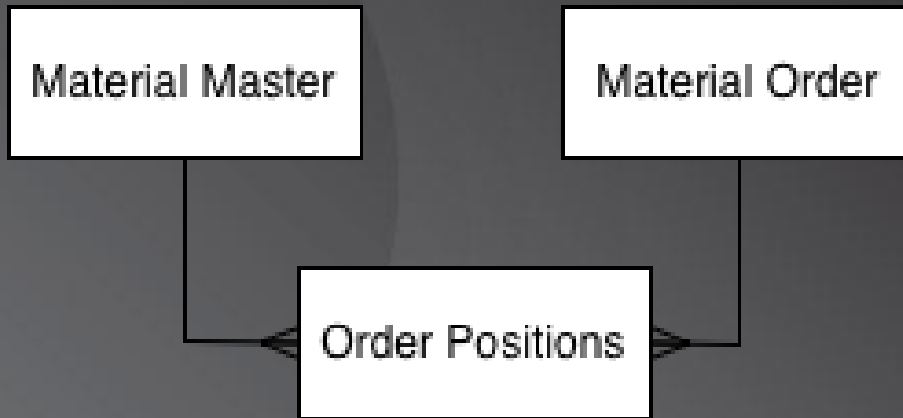


Figure 1: ER Diagram

- Links between tables are fixed
- Constraints and restrictions are fixed
- Databases make sure that the data is consistent

BUT:

- This reduces the flexibility of process design

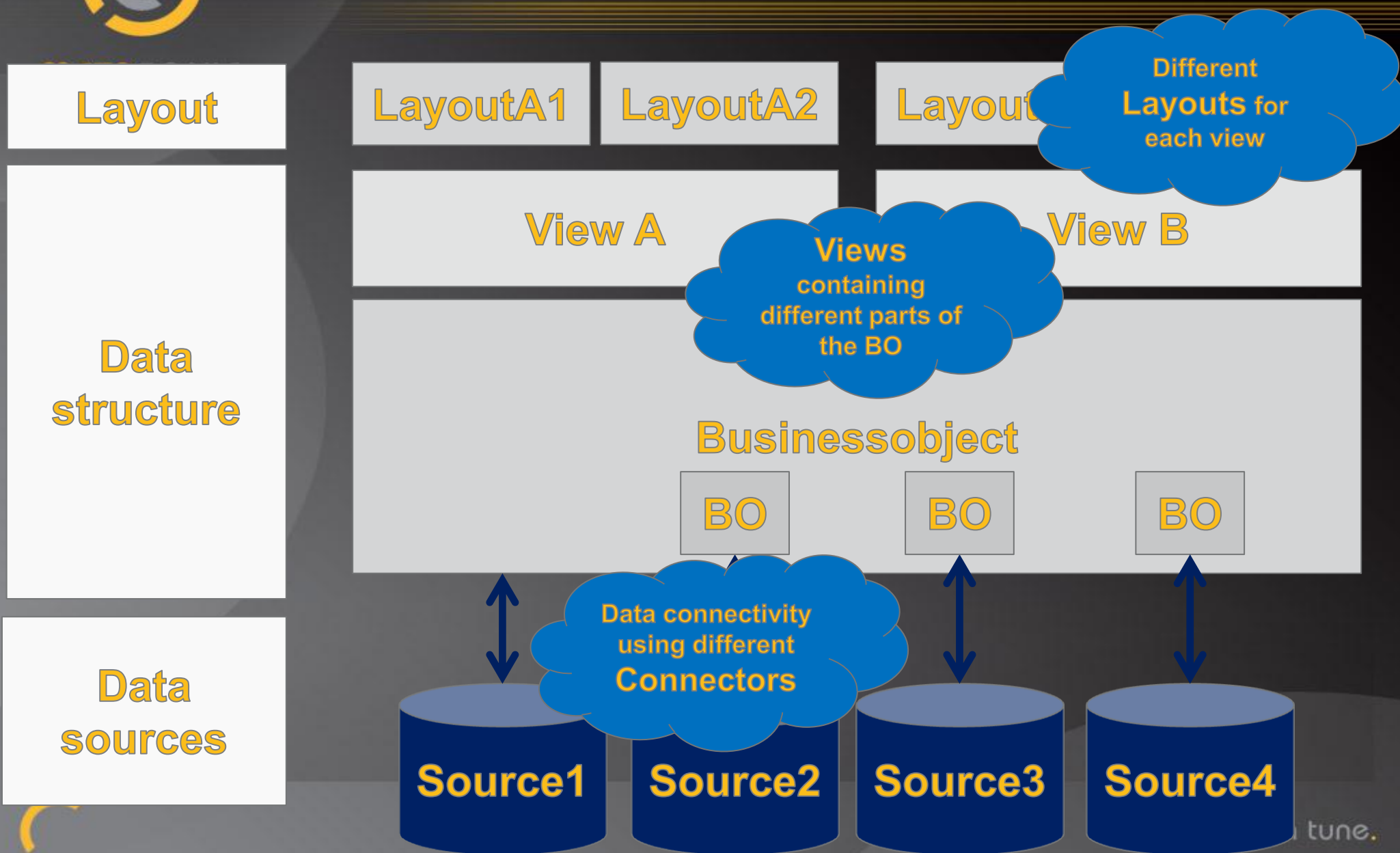
COMMON ISSUES

- How to create loosely coupled processes without having loosely coupled data?
- How to design data collection processes?
- How to ensure that the process designer can not destroy data consistency?
- How to create flexible processes without having flexible data structures?





BUSINESS OBJECT ARCHITECTURE

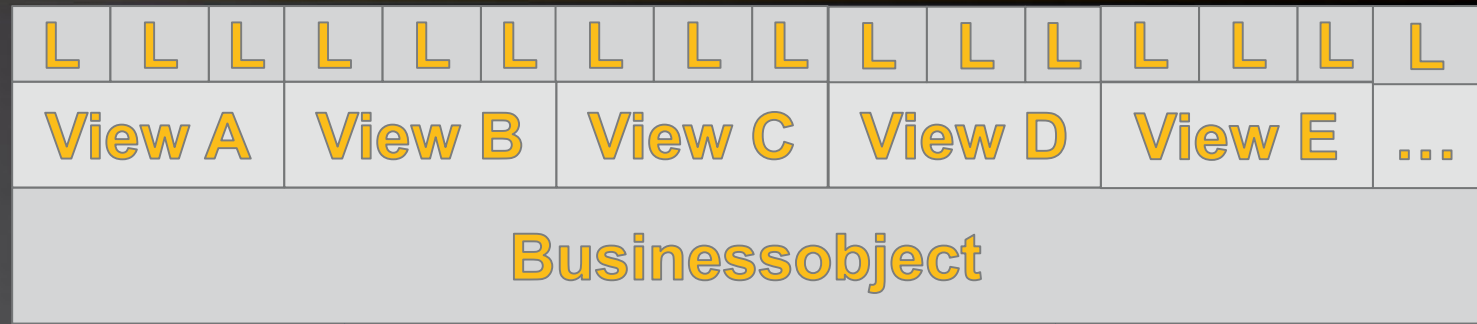




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BUSINESSOBJECTS – DATA CONNECTIVITY

Process
modeller



IT department



Data

Standard Connectors (existing):

- Relational DB's
- SOAP
- LDAP
- Standard Metasonic DB

Interface for custom connectors exists



Data

process. in tune.

DEFINITION OF THE BUSINESS OBJECT

Resource - BOTest/src/com/jcom1/jpass/businessobjects/example/Rechnung.bo - Eclipse Platform

File Edit Navigate Search Project BeanGenerator Run Window Help

Project Explorer

- BOTest
 - src
 - com.jcom1.jpass.businessobjects
 - Adresse.bo
 - Rechnung.bo
 - TestBO.bo
 - validation-api-1.0.0.GA.jar
 - lib
 - com.jcom1.go3

BO: Rechnung.bo BO: Adresse.bo

Business Object "Rechnung"

Select Elements for BO:

Element	Type
Rechnung	
rechnungsNummer	String
rechnungsDatum	Date
rechnungsAdresse_Central	GO (Adresse_Central)
rechnungsAdresse	GO (Adresse)
anrede	Enumeration
vorname	String
nachname	String
anschrift	String
lieferAdresse	GO (Adresse)
lieferAdresseAbweichend	Boolean
rechnungsPositionen	List (Complex)
posNr	Integer
bezeichnung	String
anzahl	Integer
einzelpreis	Decimal
singleRechnungsPosition	Complex
rechnungsSumme	Decimal
zusatzInfos	List (Attachment)

Properties Rules View

Element "posNr"

General Properties

Restrictions

Name: posNr
Type: Integer

BO: Rechnung.bo BO: Adresse.bo

Business Object "Rechnung"

Select Elements for BO:

Element	Type	Min	Max	Mandatory
Rechnung				
rechnungsNummer	String	1	1	<input checked="" type="checkbox"/>
rechnungsDatum	Date	1	1	<input checked="" type="checkbox"/>
rechnungsAdresse_Central	GO (Adresse_Central)	0	1	<input type="checkbox"/>
rechnungsAdresse	GO (Adresse)	1	1	<input checked="" type="checkbox"/>
anrede	Enumeration	1	1	<input checked="" type="checkbox"/>
vorname	String	1	1	<input checked="" type="checkbox"/>
nachname	String	1	1	<input checked="" type="checkbox"/>
anschrift	String	1	1	<input checked="" type="checkbox"/>
lieferAdresse	GO (Adresse)	0	1	<input type="checkbox"/>
lieferAdresseAbweichend	Boolean	1	1	<input checked="" type="checkbox"/>
rechnungsPositionen	List (Complex)	1	*	<input checked="" type="checkbox"/>
posNr	Integer	1	1	<input checked="" type="checkbox"/>
bezeichnung	String	1	1	<input checked="" type="checkbox"/>
anzahl	Integer	1	1	<input checked="" type="checkbox"/>
einzelpreis	Decimal	1	1	<input checked="" type="checkbox"/>
singleRechnungsPosition	Complex	1	1	<input checked="" type="checkbox"/>
rechnungsSumme	Decimal	1	1	<input checked="" type="checkbox"/>
zusatzInfos	List (Attachment)	0	*	<input type="checkbox"/>





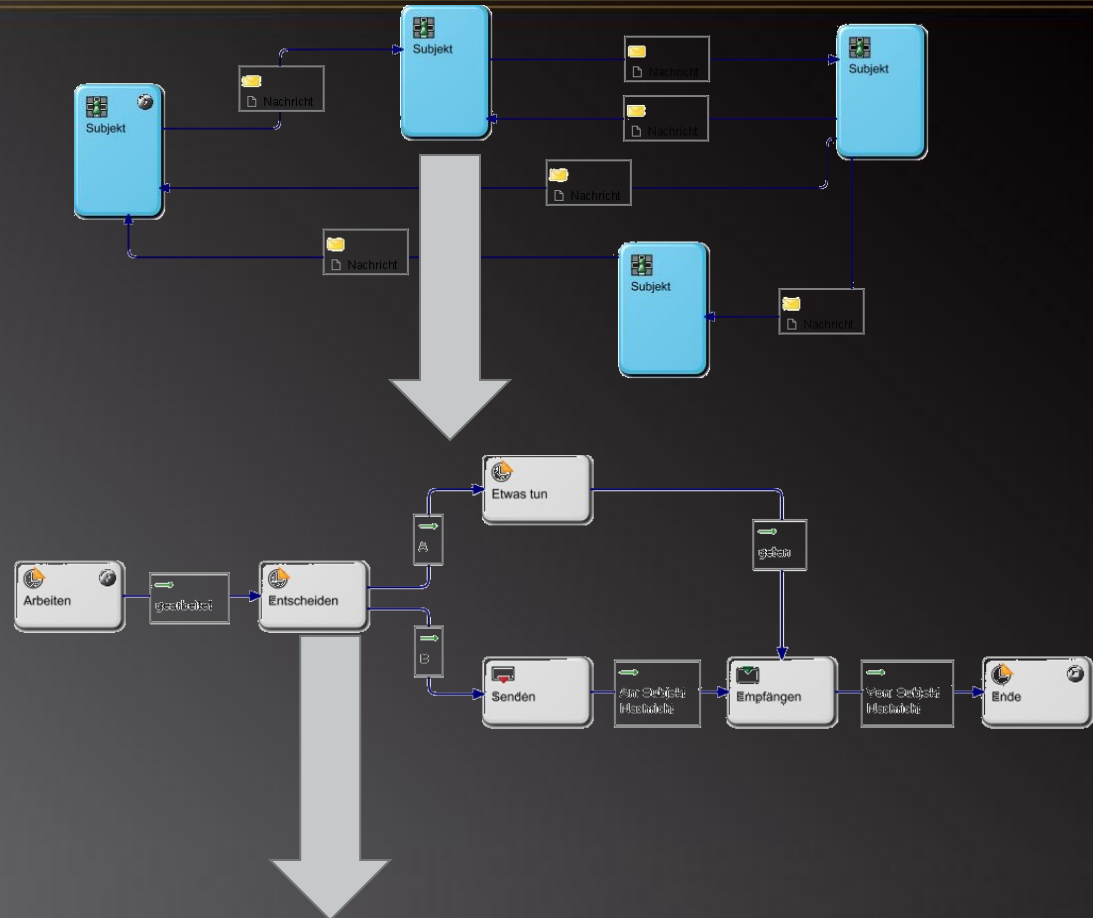
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BUSINESSOBJECT – PROCESS - RELATION

• Process

• Subject

• Input -> Output



BO
View

Used Layout

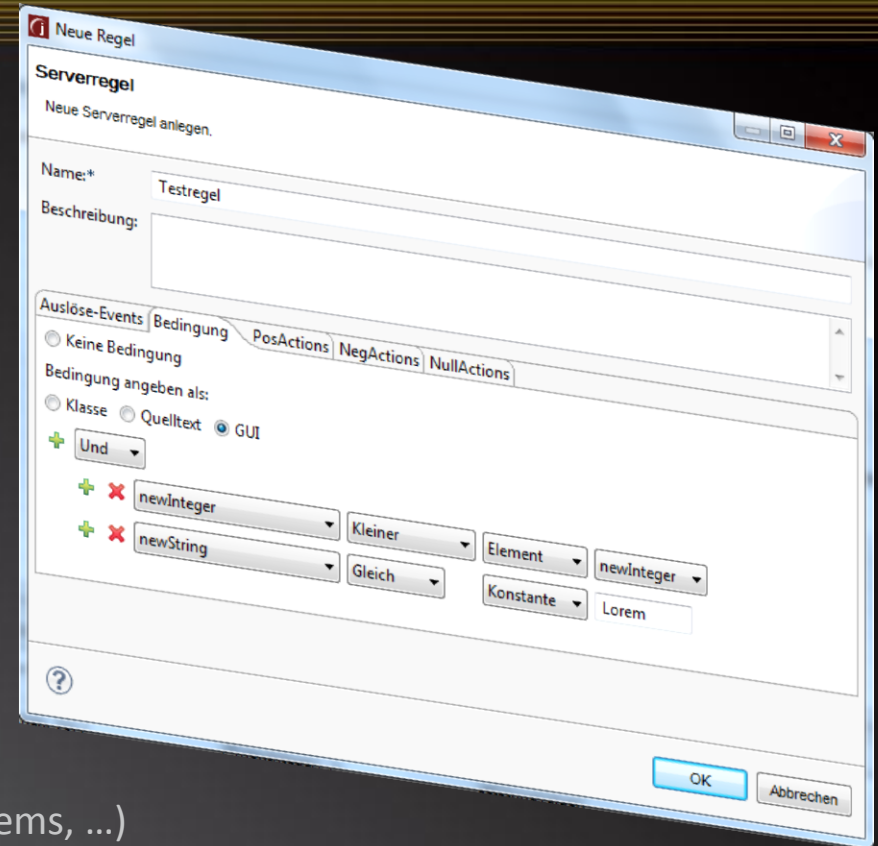
process.in tune.



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BUSINESSOBJECT RULES

- Rules will be executed automatically
- Rules will be executed in...
 - Frontend (Form View)
 - Backend (Form Engine)
- Each rule consists of...
 - **Trigger** (WHEN will a rule be executed?)
 - **Condition** (WHICH result?)
 - **Action** (WHAT will be executed?)
- Rules can...
 - execute calculations automatically (Sum up order items, ...)
 - Show/hide form fields (z.B. alternative delivery address, ...)
 - Execute RPC-Calls & call services
 - Make decisions for further process execution automatically

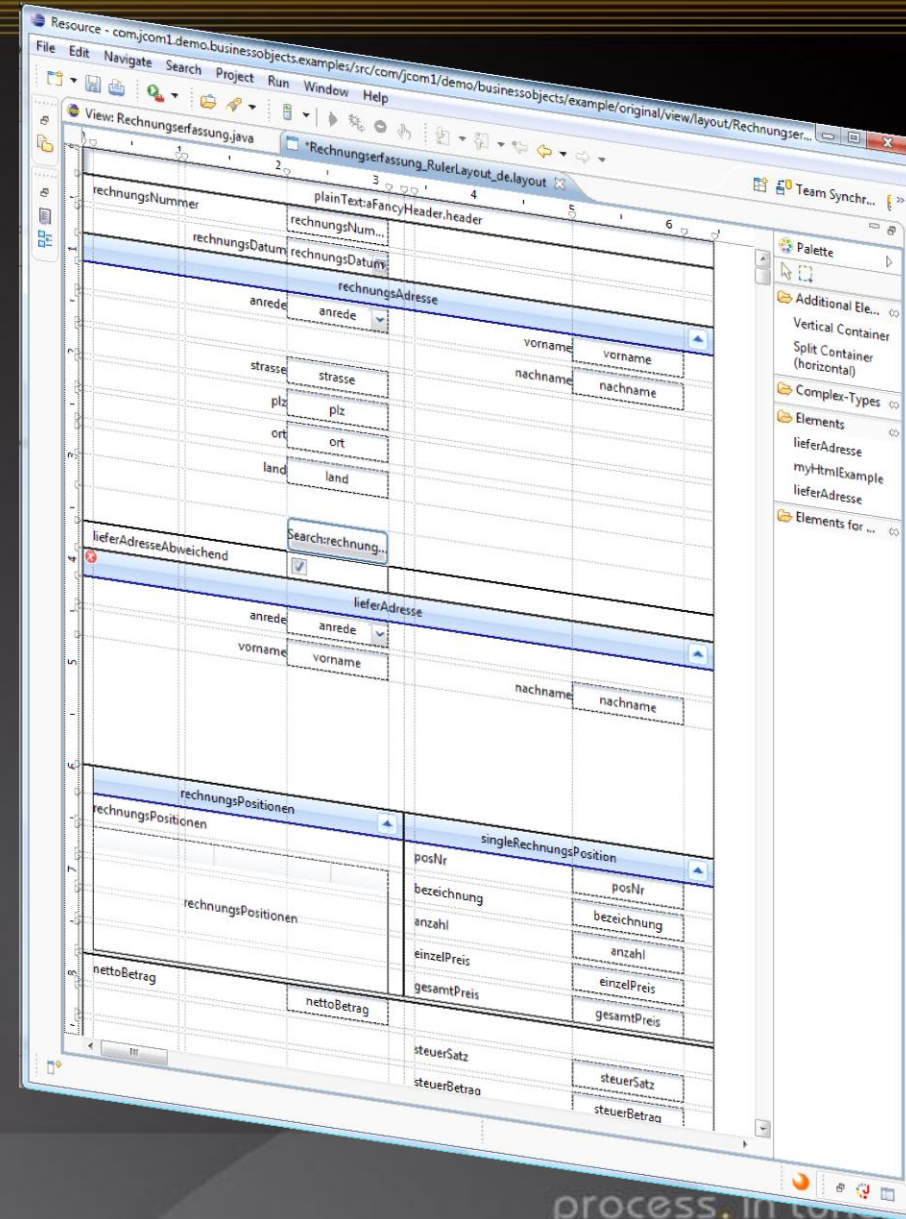




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BUSINESSOBJECT LAYOUTS

- **Layouts**
 - Automatically generated default layouts (for each view)
 - Own layouts
 - WYSIWYG-Layouteditor
- **Layouts depend on...**
 - Display device (e.g. mobile vs. PC)
 - resolution
 - Language
- **Layout-Templates**
 - Generators for default layouts in own CI



process. in time



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ADDITIONAL FEATURES

- Default layouts for seamless integration in Metasonic Flow
- Form can also be used from outside of Metasonic Flow als standalone frontend

The screenshot displays the jFLOW! application window. The title bar reads 'jFLOW!'. The menu bar includes 'Task', 'Process', 'Control', 'Attachments', 'Notes', and 'Help'. The user 'Max Mustermann' is logged in. The main content area shows a process flow for 'Deal Management SOLL->Händler->2.2 Ticket ausfüllen'. The form fields are as follows:

- Title:** 09/07/2010 15:39 - Deal Management SOLL
- From:** Max Mustermann
- Date:** 09/07/2010 15:39
- Deal ID:** 45
- Zeitangabe:**
 - Datum:** 15.09.10
 - Uhrzeit:** (empty field with a red error icon)
- Dauer:** (empty field)
- Details:**
 - Megawatt:** 500
 - Megawattstunden:** 5000
 - Preis:** 12
 - Kauf:** ☒
- Handelspartner:** (empty field)
- Abwicklung:** (empty field)

At the bottom, there are buttons for 'Absenden', 'Zwischenspeichern', 'Löschen', and 'Schließen'. A 'Start state' button is also visible in the process flow area.



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